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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,463	12/08/2003	Travis T. Hailey JR.	2003-IP-012888 U1 USA	2895

30652 7590 04/21/2006

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EXAMINER

GAY, JENNIFER HAWKINS

ART UNIT PAPER NUMBER

3672

DATE MAILED: 04/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/730,463

Applicant(s)

HAILEY ET AL.

Examiner

Jennifer H. Gay

Art Unit

3672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-57 is/are pending in the application.
- 4a) Of the above claim(s) 5-10 and 36-39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 11-35 and 40-57 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/19/04, 3/29/04, 7/15/04, 7/19/04, 4/27/05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Species Ic in the reply filed on August 8, 2005 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. Claims 5-10 and 36-39 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on August 8, 2005.

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 78. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 3672

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-4, 11, 12, 17-20, 26-31, 40-49, 52, and 53 are rejected under 35 U.S.C. 102(e) as being anticipated by Nguyen et al. (US 6,761,218).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claims 1, 52: Nguyen et al. discloses an apparatus for gravel packing an interval of a wellbore. The apparatus includes the following features:

- A shroud **20/60** positioned in a wellbore interval around a sand screen **21**. The shroud includes a plurality of packing and production ports **24** along its length. *The examiner notes that column 7, lines 22-60 disclose that some of the ports **24** are blocked thus the ones that are blocked are considered to be production ports and the ones that are one are considered to be packing ports.*
- A removable material **64** at least partially blocking the flow through the production ports.

Regarding claims 2, 27: The removable material blocks the flow through the production ports.

Regarding claims 3, 30: The removable material forms plugs that are matched to the shape of the production ports thus filling the ports.

Regarding claims 4, 11, 12, 17, 18: The ports are circular openings in the shroud with an inner diameter of about ¼ inch (5:35-38).

Regarding claims 19, 20: The production ports provide an open area that covers a percentage of the surface area of the shroud. The degree to which the surface area is covered can be varied to control the restriction of fluid moving through the shroud (7:1-8). Further, Figures 1-3 show that the ports **24** cover at least 10% of the surface area of the shroud.

Regarding claims 26, 53: Nguyen et al. discloses a method for using the above apparatus that involves blocking the production ports with the removable material, inserting the apparatus in the wellbore, and flowing a gravel slurry through an annulus **23** between the shroud and the screen.

Regarding claims 28, 29: The method further involves removing the material to allow production fluid to flow through the ports.

Regarding claim 31: Each of the production ports includes a plug.

Regarding claims 40-44: The removable material may be designed to dissolve on contact with well fluids where the material may be such things as a polylactic acid that dissolves when contacted by water, an oil soluble resin that dissolves when contacted by oil, an oil well treatment chemical, or a scale inhibitor (Abstract).

Regarding claims 45-49: The removable material may be designed to dissolve on contact with an acid where the material may be zinc, aluminum, magnesium, or alloys thereof. Injecting hydrochloric acid into the well dissolves the material.

6. Claims 1-4, 11, 12, 17-20, 26-31, 40-49, 52, and 53 are rejected under 35 U.S.C. 102(a) as being anticipated by Nguyen et al. (US 2003/0183387).

Regarding claims 1, 52: Nguyen et al. discloses an apparatus for gravel packing an interval of a wellbore. The apparatus includes the following features:

- A shroud **20/60** positioned in a wellbore interval around a sand screen **21**. The shroud includes a plurality of packing and production ports **24** along its length. *The examiner notes that column 7, lines 22-60 disclose that some of the ports **24** are blocked thus the ones that are blocked are considered to be production ports and the ones that are one are considered to be packing ports.*

- A removable material **64** at least partially blocking the flow through the production ports.

Regarding claims 2, 27: The removable material blocks the flow through the production ports.

Regarding claims 3, 30: The removable material forms plugs that are matched to the shape of the production ports thus filling the ports.

Regarding claims 4, 11, 12, 17, 18: The ports are circular openings in the shroud with an inner diameter of about $\frac{1}{4}$ inch (5:35-38).

Regarding claims 19, 20: The production ports provide an open area that covers a percentage of the surface area of the shroud. The degree to which the surface area is covered can be varied to control the restriction of fluid moving through the shroud (7:1-8). Further, Figures 1-3 show that the ports **24** cover at least 10% of the surface area of the shroud.

Regarding claims 26, 53: Nguyen et al. discloses a method for using the above apparatus that involves blocking the production ports with the removable material, inserting the apparatus in the wellbore, and flowing a gravel slurry through an annulus **23** between the shroud and the screen.

Regarding claims 28, 29: The method further involves removing the material to allow production fluid to flow through the ports.

Regarding claim 31: Each of the production ports includes a plug.

Regarding claims 40-44: The removable material may be designed to dissolve on contact with well fluids where the material may be such things as a polylactic acid that dissolves when contacted by water, an oil soluble resin that dissolves when contacted by oil, an oil well treatment chemical, or a scale inhibitor (Abstract).

Regarding claims 45-49: The removable material may be designed to dissolve on contact with an acid where the material may be zinc, aluminum, magnesium, or alloys thereof. Injecting hydrochloric acid into the well dissolves the material.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 13-16 are rejected under 35 U.S.C. 103(a) as being obvious over Nguyen et al. ('218).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).

Regarding claims 13-15: Nguyen et al. discloses all of the limitations of the above claim(s) except for the spacing of the packing ports along the shroud. However, it would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the shroud and packing ports of Nguyen et al. do that groups of packing ports were spaced between three and six feet in order to have provided adequate spacing of the gravel slurry injection locations thus reducing the chances of forming bridges during the operation.

Further, it would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the shroud and packing ports of Nguyen et al. do that groups of packing ports were spaced between three and six feet,

since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable range involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Regarding claim 16: The packing ports are radially distributed about the circumference of the shroud (Figures).

9. Claims 21-25, 32-35, 50, 51, and 54-57 are rejected under 35 U.S.C. 103(a) as being obvious over Nguyen et al. ('218) in view of Restarick (US 5,355,956).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).

Regarding claims 21-23, 32-34: Nguyen et al. discloses all of the limitations of the above claim(s) except for the plugs including a port that allows fluid to flow through the plug thus allowing the plug to act as a packing port to some degree.

Restarick discloses an apparatus similar to that of Nguyen et al. in that it discloses a wellbore screen covered by a shroud that includes plugged openings. Restarick further teaches that the plugs 54 may include a port 58 through which fluid may flow. *The examiner notes that the port 58 is initially blocked by the end of the plug 60 until the end 60 is sheared off. At that time the plug 54 is a plug with a port therethrough.*

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the plugs of Nguyen et al. so that they included a port thus allowing the lugs to act as limited packing ports in order to have

provided a means for providing additional packing ports if the operator determines that more ports are necessary while still protecting those ports from damage prior to being used as production ports.

Regarding claims 24, 25, 50, 51: Nguyen et al. discloses all of the limitations of the above claim(s) except for a flow limiting tube positioned in at least one of the packing ports where the tube has a length at least four times its inner diameter.

The plugs 54 of Restarick could also be considered flow limiting tubes as this is indeed what the flow path therethrough would do after the end was sheared from the plug.

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the packing ports of Nguyen et al. to include flow limiting tubes as taught by Restarick in order to have been able to control the flow of gravel slurry through the ports thus allowing more control over the operation and reducing the likelihood of forming bridges within the annulus.

Regarding claims 35, 54-57: Nguyen et al. discloses all of the limitations of the above claim(s) except for forming a profile on the outer surface of each plug to mechanically engage the ports and except for the plugs having sleeves that are filled with the removable material.

The plugs 54 of Restarick are shown to have a metal sleeve that has an outer threaded profile that engages an inner threaded profile on the ports.

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the plugs of Nguyen et al. to include an outer profile for mechanically engaging the ports as taught by Restarick in order to have prevented the plugs from prematurely dislodging from the ports.

10. Claims 13-16 are rejected under 35 U.S.C. 103(a) as being obvious over Nguyen et al. ('387).

Regarding claims 13-15: Nguyen et al. discloses all of the limitations of the above claim(s) except for the spacing of the packing ports along the shroud. However, it would have been considered obvious to one of ordinary skill in the art, at the time the invention

was made, to have modified the shroud and packing ports of Nguyen et al. do that groups of packing ports were spaced between three and six feet in order to have provided adequate spacing of the gravel slurry injection locations thus reducing the chances of forming bridges during the operation.

Further, it would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the shroud and packing ports of Nguyen et al. do that groups of packing ports were spaced between three and six feet, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable range involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Regarding claim 16: The packing ports are radially distributed about the circumference of the shroud (Figures).

11. Claims 21-25, 32-35, 50, 51, and 54-57 are rejected under 35 U.S.C. 103(a) as being obvious over Nguyen et al. ('387) in view of Restarick (US 5,355,956).

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Restarick discloses an apparatus similar to that of Nguyen et al. in that it discloses a wellbore screen covered by a shroud that includes plugged openings. Restarick further teaches that the plugs 54 may include a port 58 through which fluid may flow. *The examiner notes that the port 58 is initially blocked by the end of the plug 60 until the end 60 is sheared off. At that time the plug 54 is a plug with a port therethrough.*

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the plugs of Nguyen et al. so that they included a port thus allowing the lugs to act as limited packing ports in order to have provided a means for providing additional packing ports if the operator determines that more ports are necessary while still protecting those ports from damage prior to being used as production ports.

Regarding claims 24, 25, 50, 51: Nguyen et al. discloses all of the limitations of the above claim(s) except for a flow limiting tube positioned in at least one of the packing ports where the tube has a length at least four times its inner diameter.

The plugs **54** of Restarick could also be considered flow limiting tubes as this is indeed what the flow path therethrough would do after the end was sheared from the plug.

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Regarding claims 35, 54-57: Nguyen et al. discloses all of the limitations of the above claim(s) except for forming a profile on the outer surface of each plug to mechanically engage the ports and except for the plugs having sleeves that are filled with the removable material.

The plugs **54** of Restarick are shown to have a metal sleeve that has an outer threaded profile that engages an inner threaded profile on the ports.

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the plugs of Nguyen et al. to include an outer profile for mechanically engaging the ports as taught by Restarick in order to have prevented the plugs from prematurely dislodging from the ports.

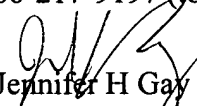
Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer H. Gay whose telephone number is (571) 272-7029. The examiner can normally be reached on Monday-Thursday, 6:30-4:00 and Friday, 6:30-1:00.

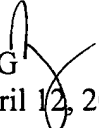
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on (571) 272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3672

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jennifer H Gay
Primary Examiner
Art Unit 3672



JHG
April 12, 2006